



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

## DISCUSSION

### INTERPRETATION OF WATER WORKS ACCOUNTS<sup>1</sup>

BY MARK WOLFF<sup>2</sup>

MR. ALLEN HAZEN: Mr. President, this paper takes up a number of different subjects. We are indebted to the author for his clear forms for stating the principal accounts in a water works system.

In the matter of computing the value of fire services a subject is introduced that is entirely foreign to the bookkeeping end; and while the presentation is interesting and the raising of the rate in the particular case mentioned is certainly commendable, the speaker is inclined to take issue with the author on the method of computation. As he understands it, the author has estimated the cost of furnishing water for all other purposes, and then subtracts that amount from the entire cost of the actual service and in that way arrives at the supposed cost of the fire service. It seems, if you will permit the comparison, that that is exactly comparable to going to the Grand Central Station and asking for a ticket to Albany and demanding that the price of the ticket be determined by the difference in cost to the railroad of running the train because of one's presence on it. Is that not a comparable proposition to figuring the fire service as it is done by the author? There are other considerations that might properly be taken into account, and that were taken into account in the report of the committee of this Association which reported several years ago, which report will be found in the proceedings.

MR. F. T. KEMBLE: It would seem that the percentage allowed to fire protection is altogether too low. The Suburban Fire Insurance Exchange, in fixing the rate for insurance for this section, demands that water companies have a pump station equipment and piping of capacity of five times the maximum consumption.

<sup>1</sup> Published in June, 1916, JOURNAL, Vol. 3, No. 2, at pp. 529-556.

<sup>2</sup> Certified public accountant, New York City.

While consideration of future requirements might induce companies to install mains of a size that would meet this condition, certainly a large part of the pumping equipment and boilers would not be of the size they are, but for the fire protection demand. It would seem that that item might be further considered.

MR. W. E. MILLER: The speaker may have misunderstood the paper in this respect, but it was his understanding that the method of determination of the value of the fire protection service, as stated in the paper, was a quotation from a paper by Mr. Wilcox; and he also desires to take issue with Mr. Wilcox with regard to that method of determining the value of fire protection service. It seems to be making the fire protection service a matter of secondary importance. If there is any difference between the importance of the fire hydrant service and general domestic or commercial service, the fire protection service is entitled to the first rank. Some plants have been built for fire protection service purely, more of them have been built purely for fire protection service than for purely commercial service; and even in a good many instances where they have been built for the combined service, there is evidence that fire protection was the immediate necessity. For example, the city of Milwaukee had no water works until about 1872, and the United States census of 1870 gave the city a population of more than 70,000. These 70,000 people had water for ordinary everyday use, but they realized that their insurance was too high and that they could cut the cost of their insurance rates and reduce their fire losses. Many water plants have passed their first year or two with but little revenue outside of their hydrant rentals. So it seems that you have in these facts strong evidence that fire protection service is of primary importance. Therefore, the only reasonable and equitable basis for apportioning the expenses, including fixed charges and depreciation, is the relative expense of each kind which would be involved in furnishing the two kinds of service from two separate plants, each designed for its own class of service. That, however, is hardly in line with the subject of the paper, which is primarily one of accounting.

MR. MARK WOLFF: The quotation from Mr. Wilcox' article on fire protection and the chart illustrating the fire protection income account of the Queen County Water Company were inserted in this

paper for the purpose of emphasizing how important it is to have a proper classification of accounts available in rate cases. One of the elements entering into the cost of fire protection, as shown in diagram 9, is the portion of the operating expenses attributable to fire protection, and unless expenses are shown on the books in sufficient detail it is very difficult to satisfactorily apportion this cost between domestic service and fire protection. The problem of estimating the cost of fire protection does not pertain exclusively to engineering; accounting certainly has something to do with it.

The speaker also agrees with the previous speaker, that had we figured the cost of fire protection separately, that is, figured what it would cost to erect a plant solely for fire protection, and also what it would cost to erect a plant solely for domestic service, as was done in Wisconsin, and then apply the percentages as between the one and the other, we would in this particular case, have arrived at a greater percentage of fire protection chargeable to the city of New York. However, the method outlined was not intended to be a general method, it was only the method used in the particular case of the Queen's County Water Company, which was not built for the purpose of furnishing fire protection primarily; the furnishing of fire protection was only incidental. The company was organized to serve private consumers, to render domestic service, and the fire protection in this particular case was only incidental. The company had some difficulty collecting its bills, at the increased rate, from the city, because of the finance department not agreeing with the deputy commissioner as to the method of computation. The finance department thought it ought to be considerably less. They thought there was no reason for an increase of 300 per cent; so that although conservative methods were used we were unable to satisfy both sides.

MR. W. Z. SMITH: Will the author of this very interesting paper state whether there was any account kept of the services rendered to the health department, that is, street washing and sewer flushing, which in some cases is a very considerable item? Also whether there was any reason why that should not be incorporated in the system of accounting illustrated?

MR. MARK WOLFF: The company charged the city for furnishing water to the public schools; it did not charge the city as a

separate item for flushing the streets. That payment was covered by the fire protection item.

MR. C. B. SALMON: Along the line of Mr. Miller's remarks there are important additional reasons for charging the municipality with the cost of the public fire service, and charging the water users only with the cost of the domestic service. For example, a nonresident owner of a large business block may not be paying any water tax, but he does receive a very large benefit in the reduced fire insurance premium on his property due to the excellent fire protection afforded by the water system, and that reduced fire insurance cost on his property is being partially paid by the individual services being charged in excess of what they would be charged if the municipality paid its just share of the expenses of the public fire service.

The question is a very important one and is becoming more so in valuing utility property before the state public service commission as to what per cent the municipality shall be charged for its fire protection, and what per cent should be charged the domestic service in establishing rates. The public is becoming very sensitive on this point because in many cases it is bearing the greater part of the fire service that the city in general should pay, and the benefit is going towards reducing premiums on insurance of many property owners who bear no part of the burden of the water service.

As Mr. Miller has intimated Wisconsin has taken and adhered to the most correct principle for adjusting rates as between the municipality and the domestic service, and in many cities, especially those having twenty to fifty thousand population the fair share of the municipalities' burden of a water system has been found to be from 35 per cent to 50 per cent of the total amount of the operating income.

An additional reason is that the public fire service often protects the private residence property of many people who do not take water or pay anything for it, but their property is protected from fire; and in so far as the municipality does not pay its full share of the cost of the public fire protection, the water consumer is helping to pay for protecting the nonusers' property from fire, except in so far as his taxes, which in this case do not cover all the cost of the fire service, pay a part.

The fair and proper rate chargeable to the public fire service is becoming more and more important because if not properly charged

against the municipality, it will become a continuing basis for quarrels with respect to domestic rates. On the other hand, the domestic service could be lowered and the individual get water at a much less rate if the municipality paid its fair share of the public fire protection. It would also lessen a great many annoying disputes and complaints arising from supposedly too high domestic rates.

The public fire protection service should be paid by the municipality and figured on the basis of what it would cost the city to build and operate a water works system for fire and public service only.

Mr. Wolff in his accounting does not make any charge in the office expense for the items of collection, but admits that when rates are raised it causes considerable trouble. Those who have had the collection of fire hydrant rentals know that this is often one of the biggest expenses that fall on a private company, often leading into extensive litigation. As to water furnished to public schools and for sewers every one of those departments should certainly pay for the water they use as the service is a public one. If the municipality is conducting the public schools it should pay and if the schools are conducted by a school board they should pay. Water for flushing sewers and sprinkling streets should be paid either by the municipality or the board of public works, which in either case would come through general taxation. All of these services put together and joined with the fire service would reduce the rate to the consumer and relieve the public as well as the utility of a great deal of agitation and costly litigation.

MR. F. T. KEMBLE: One point that Mr Wolff made is of great interest to all of us who are connected with private water companies; that is the item that water charges become a lien on the property. Anything that will help us towards collecting our charges at times of change of ownership will be of great service. At present we are stuck every time property is sold under a foreclosure, while with an ordinary change of ownership, which we may, or may not be posted about, it is a very difficult matter to make the retiring owner give up. It seems that Mr. Wolff's suggestion in that matter might well be emphasized.